CLAIMS

1. A process for producing a polyurethane foam, which comprises allowing an organic polyisocyanate component to react with a polyol component in the presence of a catalyst with water as a foaming agent, wherein

the polyol component comprises at least 30% by weight of a copolymerized lactone polyol having a hydroxyl value of 20 to 350 KOHmg/g and being in the form of a liquid at an ordinary temperature, and the copolymerized lactone polyol is obtained by ring opening copolymerization of ε-caprolactone and δ-valerolactone in a molar ratio [ε-caprolactone/δ-valerolactone] of 80/20 to 20/80 with a low molecular weight compound having at least two active hydrogen groups as an initiator; and

the hydroxyl value of the polyol component is 40 to 400 KOHmg/g.

2. A process for producing a polyurethane foam according to claim 1, wherein the low molecular weight compound having at least two active hydrogen groups comprises at least one member selected from the group consisting of ethylene glycol, diethylene glycol, propylene glycol, dipropylene glycol, 1,4-butanediol, 1,5-pentanediol, neopentyl glycol, 1,6-hexanediol, glycerin, trimethylolpropane, triethanolamine and pentaerythritol.

3. A process for producing a polyurethane foam

according to claim 1 or 2, wherein the viscosity of the copolymerized lactone polyol is not more than 20,000 mPa·s at 25°C.